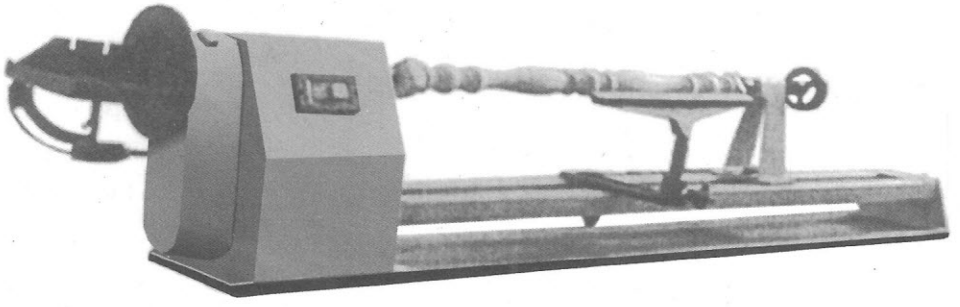
CENTRAL MACHINERY®

14" x 40" WOOD LATHE WITH 7" SANDING DISC

Model 36066



Distributed Exclusively by
HARBOR FREIGHT TOOLS

3491 Mission Oaks Blvd. / Camarillo, CA 93011

Uploaded by:
Ernest S. Davis
Spartanburg, SC

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For technical questions and replacement parts, please call 1-800-444-3353.

SPECIFICATIONS

Motor:	1/2 HP, 115V, 60Hz, 1790 RPM; 18.2 amps under load
Spindle Speeds:	1125, 1640, 2360, & 3450 RPM
Distance Between Centers:	40"
Swing Over Bed:	14"
Tail Stock Quill:	3-1/2" Travel; MT2 Taper
Sanding Disc:	7"
Disc Table:	1/2" Miter Gauge Slot; 7-1/2" x 5" overall size
Overall Dimensions:	63-3/4" x 11" x 15"

SAVE THIS MANUAL

You will need this manual for the safety instructions, assembly instructions, operating procedures, parts list, and diagram. Write your invoice number on the inside front cover. Put both your manual and invoice in a safe, dry place for future reference.

IMPORTANT SAFETY PRECAUTIONS

WARNING: When using electric tools, machines or equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.
READ ALL INSTRUCTIONS BEFORE USING THIS TOOL

1. KEEP WORK AREA CLEAN. Cluttered areas invite injuries.
2. CONSIDER WORK AREA CONDITIONS. Don't use tool in damp, wet, or poorly lit locations. Don't expose to rain. Keep work area well lit. Don't use tools in the presence of flammable gases or liquids.
3. KEEP CHILDREN AWAY. All children should be kept away from the work area. Don't let them handle tool or extension cords.
4. STORE IDLE EQUIPMENT. When not in use, tool should be locked up in a dry location to inhibit rust. If possible, store in an area out of reach of children.
5. DON'T FORCE THE TOOL. It will do the job better and more safely at the rate for which it was intended.
6. USE THE RIGHT TOOL. Don't force a small tool or attachment to do the work of a larger industrial tool. Don't use a tool for a purpose for which it was not intended.
7. DRESS PROPERLY. Don't wear loose clothing or jewelry. They can be caught in moving parts. Protective, electrically non-conductive gloves and non-skid footwear are recommended when working. Wear protective hair covering to contain long hair, preventing it from getting caught in machinery.
8. USE EYE AND EAR PROTECTION. Use a full face mask if the work you're doing produces metal filings, dust or wood chips. Goggles are acceptable in other situations. Wear a clean dust mask if the work creates a lot of fine or coarse dust. When operating for extended periods of time, use approved ear protection. Face masks, dust masks, safety goggles and ear protectors are available from Harbor Freight Tools.
9. DON'T ABUSE THE POWER CORD. Do not yank it to disconnect it from receptacle. Do not move bench-mounted or floor-standing machines with the power cord in the outlet. Keep cord

away from heat, oil, and sharp edges.
10. DON'T OVERREACH. Keep proper footing and balance at all times.
11. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have them repaired by an authorized service facility. Keep handles dry, clean, and free from oil and grease.
12. DISCONNECT POWER. Unplug when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.
13. REMOVE ADJUSTING KEYS AND WRENCHES. Make it a habit to check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
14. AVOID UNINTENTIONAL STARTING. Be sure the switch is in the OFF position when not in use and before plugging in.
15. OUTDOOR EXTENSION CORDS. When the equipment is operated outdoors, use only extension cords intended for outside use. See chart under "Extension Cords" for the proper AWG rating depending upon length of the cord.
16. STAY ALERT. Watch what you are doing, use common sense. Don't operate any tool when you are tired.
17. CHECK DAMAGED PARTS. Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in the instruction manual. Have defective switches replaced by an authorized service center. Don't use the tool if switch does not turn on and off properly.
18. GUARD AGAINST ELECTRIC SHOCK. Prevent body contact with grounded surfaces: pipes, radiators, ranges, and refrigerator enclosures.
19. REPLACEMENT PARTS AND ACCESSORIES. When servicing, use only identical replacement parts. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
20. DO NOT OPERATE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate machine.
21. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutter or blade is accidentally touched.
22. KEEP GUARDS IN PLACE AND IN WORKING ORDER. Never operate machine unless all guards are functioning properly.
23. NEVER USE A TOOL IF ITS COVER OR ANY BOLTS ARE MISSING. If the cover or bolts have been removed, replace them prior to use. Maintain all parts in good working order.
24. NEVER LEAVE TOOL RUNNING UNATTENDED. Always turn off power. Do not leave tool until it comes to a complete stop.
25. CHECK WORKPIECE BEFORE STARTING LATHE. Rough out your workpiece before mounting on lathe. Do not mount workpieces that have splits or knots. With cord unplugged, rotate workpiece by hand to check for balance and proper mounting. Start with the slowest spindle speed and work up from there.
26. REMOVE THE SANDING DISC WHEN NOT IN USE. This will prevent any accidental contact with the disc when operating the lathe.

GROUNDING INSTRUCTIONS

1. This machine has a three-prong plug, the third (round) prong being the ground. Plug the machine's cord only into a three-prong receptacle. Don't attempt to defeat the protection the ground wire provides by cutting off the round prong.
2. If a three-prong receptacle is not available, you may use an adapter, but you must then connect the green ear on the adapter to the outlet. Unscrew the center screw of the outlet cover and put the screw through the green ear. Plug the adapter's two prongs into the outlet, and replace the center screw. Now plug the machine into the adapter.

VOLTAGE WARNING

Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is about the same as that specified on the nameplate of the tool. If one says 120V or 110V and the other says 115V then there will be no complications. Never try to plug a 115V tool into a 230V outlet, or the other way around. The plug and outlet have completely different shapes. This is because a power source with a voltage greater than that specified on the tool can result in a SERIOUS INJURY to the user— as well as damage to the tool. If in doubt, DO NOT PLUG IN THE TOOL. Using a power source with voltage (115V) less than the nameplate rating (230V) is harmful to the motor.

EXTENSION CORDS

You must use a three-prong extension cord with three-prong receptacles. Only use rounded jacket extension cords, preferably listed by the Underwriters Laboratories (UL). Make sure the cord is rated for outdoor use if you plan on using the tool outside; if you plan on indoor use, you may also use an outdoor rated cord. Extension cords rated for outdoor use have the letters "WA" on the cord jacket.

The extension cord must have a minimum wire size depending on the amperage of the tool and the length of the extension cord. This size is signified by its AWG (American Wire Gauge) rating; the smaller the gauge, the greater the cable's capacity. If you are using two or more cords, the total length of the combined cords must be used to determine the minimum AWG rating. Each of the cords used must meet this rating. See the chart below. Do not use cords or combinations of cords over 200 feet in length.

FEET	AWG
0-50	18
51-100	16
101-150	14
151-200	12

Always inspect extension cords for any damage. If there are any loose, frayed or exposed wires, damaged insulation, or defective connections, replace the cord.

Harbor Freight Tools can supply UL listed and outdoor rated cords in multiple AWG ratings if needed.

UNPACKING

Make sure you have all loose pieces by checking according to the list below. If any pieces are missing, please contact Harbor Freight Tools at the number on the front cover. Group as according to the list below for assembly purposes.

Loose Pieces:

No.	Group	Description
18.	1	Bottom Plate
19.	1	Bottom Plate Lock Screw
20.	1	Tool Rest Holder
21.	1	Tool Rest and Shaft
23.	1	Tool Rest Shaft Lock Bolt
30.	1	Bottom Plate Lock Lever
34.	2	Sanding Disc
35.	2	Sandpaper
36-42, 49, 51, 55.	3	Work Table Assembly
40, 43-46.	3	Miter Gauge Assembly
27, 28, 33.	4	Tail Center Assembly

ASSEMBLY

Tool Rest:

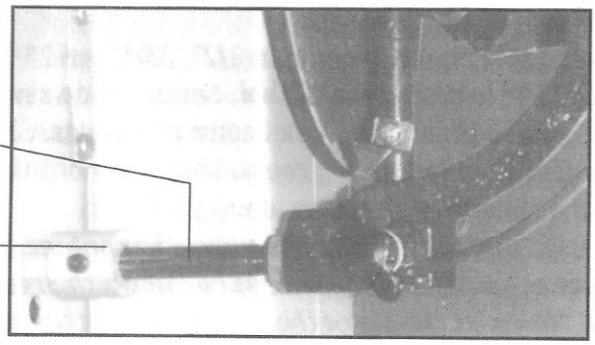
1. Sort out the pieces from group one (from the list above).
2. Place the tool rest holder (20) on top of the bed rails (1).
3. The bottom plate (18) should be located under the bed and attached to the holder using the bottom plate lock screw (19) and the bottom plate lock lever (30). The flanges of the bottom plate must be perpendicular to the bed rails.
4. Attach the tool rest and shaft (21) to the holder using the tool rest shaft lock bolt (23).

Sanding Disc:

1. Sort out the pieces from group two.
2. Peel the backing off the sandpaper (35) and attach to the sanding disc (34).
3. Open the belt cover (32) by releasing the latch and pulling towards you (if you are standing in in front of the lathe).
4. Attach the disc to the main spindle (2) and tighten the set screw (55).

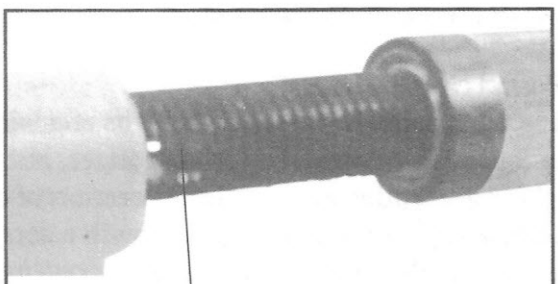
Work Table:

1. Sort out the pieces from group three.
2. Attach the table assembly's rod (42) to the lathe using the receiver located to the left of the belt cover (32). (See photo at right.)
3. Place the miter gauge assembly in the slot of the table (36).



Tail Assembly:

1. Get the pieces from group 4.
2. Using a soft mallet, tap the end of the center shaft (33) into the hole at the end of the tail screw (25). The end of the shaft should be just visible through the slot in screw. (See photo at right.)



Positioning of Center Shaft.

OPERATIONS

Tool Selection and How To Use Them:

You will need a few tools in order to make proper use of your lathe. The short list is as follows:

Center finding gauge
Soft mallet
Screwdrivers (Phillips and flat head)
Hand or Power Saw with a finishing blade
Various sized hand gouges and chisels
A selection of turning tools (see following list)

A variety of different turning tools are available for use with wood lathes. Always use good quality turning tools made from high speed steel. Always keep your tools clean and sharp for safe and optimum performance. Always use both hands to grip the tools.

1. Gouges:

Gouges typically come in 3/8", 1/2", 5/8", 3/4", and 1" (width) sizes, with both square and round noses. Standard (16-1/2") and small (13-1/2") lengths are available. They are generally used for roughing out your work; their cuts normally require finishing with finer chisels. Square gouges are used for turning between the centers of the lathe and round nose gouges are used for hollow work such as bowls. The cutting edge is normally on the bottom of the point, and is ground to a 30° angle.

Keep the square nosed gouges flat on the tool rest (21) and at right angles to your work. Turn the gouge partly on edge in the direction of the cut. Round nosed gouges are positioned as necessary to get the waste material removed evenly from the workpiece. Their cornerless design prevents them from digging in and damaging your work.

2. Wood Turning Chisels:
These tools typically come in 1/2", 3/4", and 1" (width) sizes. Standard (16-1/2") and small (13-1/2") lengths are available. Square and skew (12-1/2° to 17-1/2°) designs are common. They are used to finish the work begun by gouges. Skew chisels are ideal for finishing beads started by gouges. The blades are ground sharp on both sides so that they can cut with a slicing action and be moved either direction along the work.
To use, start with the cutting bevel in contact with your workpiece and only use the middle and lower edges. The blade should be flat on the rest or you can tilt it a little in the direction of the cut. Never let the tip of these tools catch the workpiece: this will cause the tool to fly from your hand and will also damage the workpiece. The cut (if the tool is being positioned properly) should begin at the top of the workpiece.

3. Round Nosed Chisels:
These tools come in the same lengths and widths as the Wood Turning Chisels. They are used not only for finishing work begun by gouges, but also for cutting concave shapes. This makes them ideal for decorative work and the creation of custom moldings. They are ground at a 40° angle on the underside of the point and cut with a scraping action.
Hold flat on the tool rest and keep the cutting edge centered on the middle of your workpiece. To make wider channels, move the chisel from side to side with a slow and even motion.

4. Diamond Point (or Spear Point) Chisels:
These tools come in the same lengths and widths as the Wood Turning Chisels. They are used to cut "V" grooves and for cleaning up square shoulders. The cutting edge is on the underside and is ground to 30° angle. An experience woodworker may grind the tips of various Diamond Point Chisels to different angles to create custom lines.
These tools are used in the same fashion as round nosed chisels.

5. Parting Tools:
The Parting Tools come in a 3/16" width only. The lengths are the same as the other tools. It is used for cutting finished work from waste and for squaring off the ends of your workpiece. The faceted blade gives clearance to the cutting edge, which is flat ground to a 30° angle on both sides.
Start at a right angle to the work with the handle lowered. Raise the tool to make a cut, the depth will depend upon the diameter of your workpiece. Repetitive passes are more desirable than trying to make one deep cut. Do not attempt to cut all of the way through your work with the tool. You will need to cut off the piece with a saw, using the groove as a guide.

Turning Between Centers:
1. Cut your wood to the desired length. Leave an extra 1/2" at each end (total 1" over desired length) to allow for the drive and tail stock centers.
2. Mark the center of your stock on both sides using a center finding gauge.
3. Remove the drive center (8) from the main spindle (2).
4. Hammer (using a soft mallet) the drive center into the marked spot on one end of your workpiece.
5. Screw the drive center back on the main spindle with the wood attached. Be careful to hold the wood straight on the drive center while doing this.
6. Loosen the lock lever (30) that holds the tail stock (24) in place. Advance the tail stock using the hand wheel (29) until the tail center (27) is firmly driven into your workpiece. Make sure the

tail center is aligned properly with the center markings on your workpiece. Tighten the lever.
7. Loosen the lock lever (30) that holds the tool rest holder (20) in place and position the tool rest and shaft (21) as necessary depending upon the project's needs. Tighten the lever. The angle and height of the tool rest can be adjusted using the tool rest shaft lock knob (23). A standard position (though not necessarily appropriate for every operation) for the tool rest is 1/8" from the work, and 1/8" below the center of the work.
8. Turn the workpiece by hand a few times to make sure it does not have any undue wobble, that it is straight between the centers, and does not contact the tool rest or any other part of the machine besides the two centers.
9. Start the machine and allow it to reach full speed before allowing your tool to contact the workpiece. Remember to start with the slowest speed and build up until you are more familiar with your tool and its operation. See Tool Selection for how to use each turning tool.
10. To give your workpiece a smooth, professional finish, use a very fine grit of sandpaper or polishing cloth. Hold it against the back of the workpiece while turning at the slowest speed.

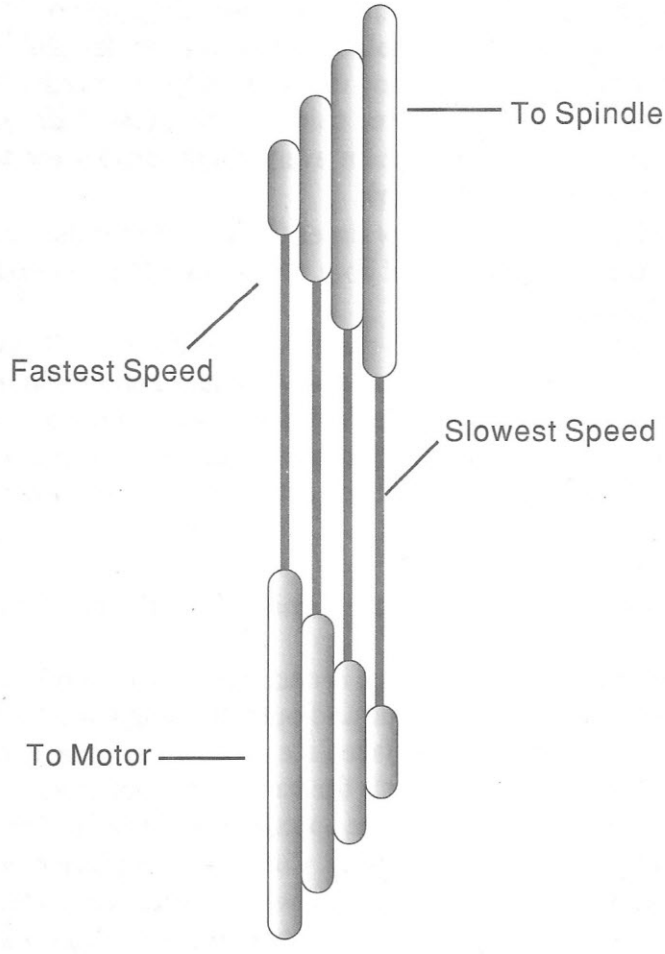
Faceplate Turning:
1. The most common use for faceplate turning is for the creation of bowls and other concave shapes.
2. Some preparation of the workpiece is necessary before mounting to your lathe. Remove as much waste material from the inside and outside using hand tools. Remove all sharp corners.
3. Your workpiece is held onto the faceplate (9) with six wood screws (sold separately). Use screws that will drive about 1/2 way through the base of the workpiece.
4. If the presence of holes will mar the appearance of the final product, you may wish to make a backing piece to protect your workpiece. Cut a 1" thick piece of wood into a 6-3/4" diameter circle. Fasten to the faceplate using six 3/4" long wood screws. Glue your workpiece to the back piece with a piece of paper inserted between the two; this will allow easier separation later.
5. Set the tool rest so that you can shape the ***outside*** of the workpiece in the manner desired.
6. When you have finished the outside surface, move the tool rest (with the lathe off and unplugged) so that it is opposite the face of the workpiece. This will allow you to "hollow out" the workpiece.

Disc Sander:
1. Always remove the disc sander (34) when not in use.
2. To mount the disc sander, loosen the set screw on the disc, and slide it on to the main spindle (2) on the opposite side of the faceplate/drive center.
3. Mount the table's rod (42) to the receiver on the back of the lathe and tighten the set screw.
4. Use the miter gauge assembly (40, 43-46) set at the desired angle for mitered angle sanding.
5. You may also tilt the table (36) to accomplish bevel sanding. Loosen the lock screw (38) and reposition the table to the desired angle according the gauge (37).

Speed Changes:

If you are unfamiliar with the operation of the lathe, or the project your are going to be working on, it is best to start at the slowest speed and work your way up as necessary.

1. Make sure power is off and lathe is unplugged.
2. Open the belt cover (32) by releasing the latch on the top and pulling towards you (if standing in front of the lathe).
3. Determine the speed you want and change the belt (11) according to the pulley chart, at right.
4. Close the belt cover before plugging the lathe in and turning on.



MAINTENANCE

NOTE: To prevent discoloration of your workpiece, use white grease for all lubrication procedures.

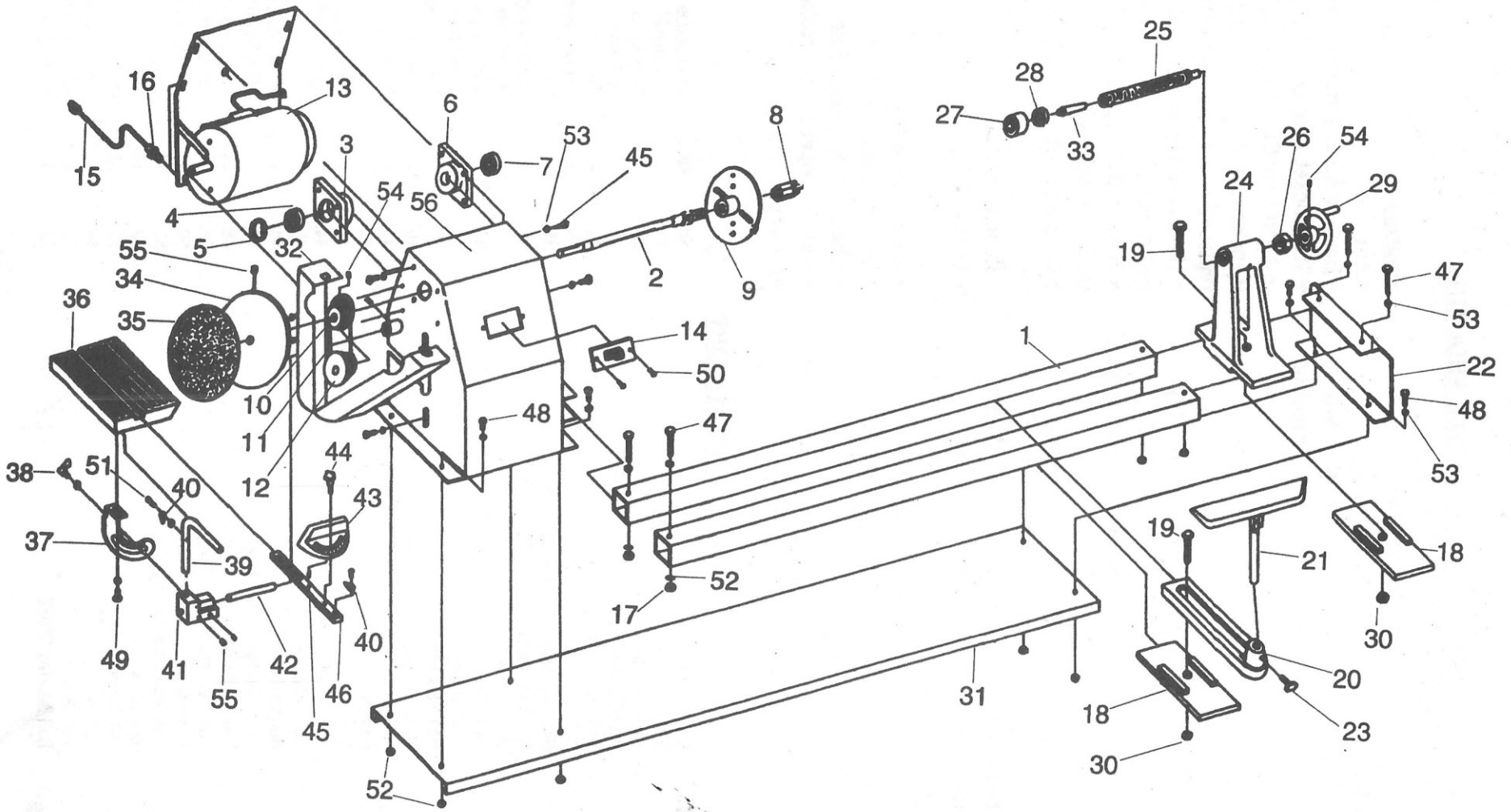
1. Grease the bed rails (1) as necessary to allow free motion of the tail stock and tool rest.
2. Keep your tools sharp and clean at all times.
3. Keep the pulleys clean and free from grease.
4. Replace belt whenever it becomes worn or frayed.
5. Grease the tail screw as necessary to allow free motion.

TROUBLE SHOOTING

Problem	Probable Cause	Solution
• Lathe will not start.	• Not plugged in.	• Plug in.
	• Fuse or circuit blown.	• Replace fuse or reset circuit.
	• Socket does not function.	• Test socket with current tester or trying another tool in socket. If socket doesn't work, have it replaced by a qualified electrician.
	• Damaged cord or plug.	• Have cord replaced by a qualified technician.
	• Switch not functioning.	• Have switch replaced by a qualified technician.
	• Motor not working.	• Contact Harbor Freight Tools.
• Lathe starts, but does not move.	• Worn or broken belt.	• Replace belt.
	• Grease on pulleys.	• Clean pulleys.
• Operation interrupted.	• Forcing unit.	• Apply less pressure.
	• Overloaded circuit.	• Use on isolated circuit.
		• Check for adequate amp rating.
		• Install proper fuses/breakers. for circuit.

PARTS LIST

No.	Qty.	Description
1.	2	Bed Rails
2.	1	Main Spindle
3.	1	Bearing Mount (Left)
4.	1	Ball Bearing 6203
5.	1	"C-Ring" R40
6.	1	Bearing Mount (Right)
7.	1	Ball Bearing 6204
8.	1	Drive Center
9.	1	Face Plate
10.	1	Drive Pulley
11.	1	Belt Ø8 x 510
12.	1	Motor Pulley
13.	1	Motor
14.	1	Switch
15.	1	Cord
16.	1	Strain Relief
17.	1	Lock Washer
18.	2	Bottom Plate
19.	2	Bottome Plate Lock Screw
20.	1	Tool Rest Holder
21.	1	Tool Rest and Shaft
22.	1	Headstock
23.	1	Tool Rest Shaft Lock Lever
24.	1	Tail Stock
25.	1	Tail Screw
26.	1	Tail Nut
27.	1	Tail Center
28.	1	Ball Bearing 6201Z
29.	1	Tail Hand Wheel
30.	2	Locking Lever
31.	1	Bed Base
32.	1	Belt Cover
33.	1	Center Shaft
34.	1	Disc
35.	1	Sanding Paper
36.	1	Work Table
37.	1	Table Angle Gauge
38.	1	Lock Screw
39.	1	Table Bracket
40.	1	Pointer
41.	1	Set Block
42.	1	Rod
43.	1	Miter Gauge
44.	1	Miter Gauge Lock Knob
45.	1	Pin
46.	1	Miter Gauge Shaft
47.	4	M8 x 56 Bolt
48.	14	M8 x 16 Bolt
49.	3	M8 x 10 Bolt
50.	3	M4 x 8 Screw
51.	10	M5 x 10 Screw
52.	10	M8 Nut
53.	31	Ø8 Washer
54.	3	M6 x 8 Set Screw
55.	4	M8 x 10 Set Screw
56.	1	Outer Cover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